

Exhibit 13



**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

NETLIST, INC.

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
INC., SAMSUNG SEMICONDUCTOR,
INC.

Civil Action No. 2:21-CV-00463-JRG
Hon. J. Rodney Gilstrap

JURY TRIAL DEMANDED

Defendants.

**PLAINTIFF NETLIST INC.'S FIFTH SUPPLEMENTAL DISCLOSURE OF
ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

Plaintiff Netlist, Inc. (“Netlist”) submits this fifth supplemental disclosure of asserted claims and infringement contentions and accompanying document production pursuant to P.R. 3-1 and 3-2 to Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Semiconductor, Inc. (collectively, “Samsung”) with respect to U.S. Patent Nos. 10,860,506 (the “’506 patent”), 10,949,339 (the “’339 patent”), 11,016,918 (the “’918 patent”), 11,232,054 (the “’054 patent”), 8,787,060 (the “’060 patent”) and 9,318,160 (the “’160 patent”) (collectively, the “Asserted Patents”).

Netlist notes that these supplemental infringement contentions are based on publicly available information and the limited production Samsung has made to date, including Samsung’s incomplete source code productions. Netlist’s statements are based on an analysis of publicly available materials that describe or discuss aspects of Samsung’s infringement, and the limited production Samsung has made to date. Discovery is currently ongoing, and Netlist’s infringement contentions, including all claim charts, are based on information

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reasonably available to Netlist at this time. Netlist expects that information to be revealed in future discovery may result in identification of additional instances of Samsung's infringement, and may also enable identification of additional claims infringed by Samsung. Netlist reserves the right to supplement or amend these contentions as permitted by the Local Rules and any Orders of the Court as discovery progresses.

Further, these contentions contain images and examples illustrating Netlist's infringement theories. These images and examples are not intended, and should not be read, as narrowing or limiting the scope of these contentions. For each asserted claim, the corresponding accused instrumentalities operate in the same manner in material parts.

I. INFRINGEMENT OF THE ASSERTED PATENTS

A. Identification of Infringed Claims

In accordance with P. R. 3-1(a), based on the public information presently available, Netlist asserts that Samsung has infringed and is infringing, directly and/or indirectly,¹ both literally and under the doctrine of equivalents, at least the following claims:

- the '506 patent: 1-3, 5, and 11-16;
- the '339 patent: 1-4, 6-23, 26-30, and 32-35;
- the '918 patent: 1-3, 5-7, 9-13, and 15-30;
- the '054 patent: 1-13, 15-17, 23-25, and 29-30;
- the '060 patent: 1-14, 16-21, and 23-28;
- the '160 patent: 1-2, 4, and 5.

Netlist makes these preliminary assertions without the benefit of complete discovery, based on Samsung's incomplete source code production, and expressly reserves the right to

¹ Netlist's infringement allegations for each of the patents addressed in this disclosure include, without limitation, infringement under 35 U.S.C. §§ 271(a)-(c), and (f).

supplement and revise its identification of asserted claims and infringing instrumentalities based on additional information obtained through discovery or otherwise to the full extent consistent with the Court's rules and orders. For example, review of pertinent physical samples, source code, HDL code, electronic schematics, circuit diagrams, data sheets and manuals may result in the addition of asserted claims.

B. Identification of Accused Instrumentalities

Pursuant to P.R. 3-1(b), Netlist presently identifies the following Samsung products, of which Netlist is aware, as "Accused Instrumentalities" under all applicable subsections of 35 U.S.C. § 271 with respect to each asserted claim as follows:

Asserted Claims	Accused Instrumentalities
<p>The '506 patent: 1-3, 5, and 11-16; The '339 patent: 1-4, 6-23, 26-30, and 32-35.</p>	<p>Samsung's DDR4 load reduced DIMMs ("LRDIMMs"), which, by way of non-limiting example, include Samsung products having the following part numbers and any products that operate in the same manner in material parts:</p> <p>M386A4K40BB0-CRC, M386A8K40BM1-CRC, M386A8K40BM2-CTD, M386A8K40BMB-CRC, M386A8K40CM2-CRC, M386A8K40CM2-CTD, M386A8K40CM2-CVF, M386A8K40DM2-CTD, M386A8K40DM2-CVF, M386A8K40DM2-CWE, M386AAG40AM3-CWE, M386AAG40MM2-CVF, M386AAG40MMB-CVF, M386AAK40B40-CUC, M386AAK40B40-CWD, M386ABG40M50-CYF, M386ABG40M51-CAE, and M386ABG40M5B-CYF.</p> <p>The Accused Instrumentalities also include any other Samsung memory products made, sold, imported and/or used by Samsung that comply with JEDEC's specifications for DDR4 LRDIMM memory modules. Examples of Samsung's DDR4 LRDIMM products can be found via Samsung's module-selector web page. <i>See Module: Memory Modules For Extensive Use</i>, Samsung, available at https://www.samsung.com/semiconductor/dram/module.</p>

<p>The '918 patent: 1-3, 5-7, 9-13, and 15-30; The '054 patent: 1-13, 15-17, 23-25, and 29-30.</p>	<p>Samsung's DDR5 LRDIMMs, registered DIMMs ("RDIMMs"), and any other Samsung memory products that operate the same way as a DDR5 LRDIMM or a DDR5 RDIMM in all material aspects.</p> <p>By way of non-limiting example, the Accused Instrumentalities include products marketed and publicized in the various Samsung materials cited in Exhibits C-D.</p>
<p>The '918 patent: 16-22; The '054 patent: 16-17, 23-25, and 29-30.</p>	<p>Samsung's DDR5 LRDIMMs, RDIMMs, small-outline DIMMs ("SODIMMs"), unbuffered DIMMs ("UDIMMs"), and any other Samsung memory products with an onboard power conversion and control module that operate the same way in all material aspects.</p> <p>By way of non-limiting example, the Accused Instrumentalities include products marketed and publicized in the various Samsung materials cited in Exhibits C-D.</p>
<p>The '060 patent: 1-14, 16-21, and 23-28; The '160 patent: 1, 2, 4 and 5.</p>	<p>Samsung's HBM2, HBM2E, HBM3 and newer products with 4 or more stacked DRAM dies products, and any other Samsung memory products that operate the same way in all material aspects. A non-exhaustive list of the model numbers includes:</p> <p>KHA883901B-MC12, KHA884901X-MC12, KHA884901X-MC13, KHA884901X-MN12, KHA884901X-MN13; KHAA44801B-MC17, KHAA84901B-MC17, KHAA44801B-MC16, KHAA84901B-JC16, KHAA84901B-JC17, KHAA84901B-MC16, KHBA84A03C-MC1HT, and KHBAC4A03C-MC1HT, and those products materials cited in Exhibits E-F.</p>

As to the other claims in each of the asserted patents, Netlist requires source code in order to determine whether they are infringed. These are claims 4, 6-10, and 17-20 of the '506 patent; claims 5, 24-25, and 31 of the '339 patent; claims 4, 8, and 14 of the '918 patent; claims 14, 18-22, and 26-28 of the '054 patent; claims 15 and 22 of the '060 patent; and claims 3 and 6-20 of the '160 patent. Samsung should treat these claims as asserted claims.



Additionally, use of the above accused products by Samsung, its agents (such as retailers, distributors, and repair services), and/or its customers infringes the asserted method-of-use claims. Samsung induces such direct infringement because it has knowledge of the patents, knows that the design of the accused products will cause them to be used in a manner that practices the steps of the asserted method-of-use claims, but nevertheless encourages such infringing use through its sales, promotion, and marketing activities with an intent of inducing infringement. In addition, Samsung is willfully blind to the risk of infringement. Samsung also contributes to direct infringement because it has knowledge of the patents, knows that the products have no substantially non-infringing use, and constitute a material part of the patented invention.

Further details can be found in the attached Exhibits A-F.

Netlist believes that its damages for Samsung's infringement may accrue on a worldwide basis, including worldwide manufacturing, uses, sales, offers to sell, and imports, to the extent permitted by applicable law or any stipulation the parties are able to reach regarding United States nexus. *See, e.g., Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, 807 F.3d 1283, 1306-11 (Fed. Cir. 2015).

Discovery in this matter is ongoing and Netlist makes these preliminary assertions without discovery yet occurring in this action, and expressly reserves the right to supplement and revise its identification of asserted claims and infringing instrumentalities based on additional information obtained through discovery or otherwise.

C. Preliminary Infringement Claim Charts

Pursuant to P.R. 3-1(c), Netlist provides the attached charts that identify where each limitation of each asserted claim is found in representative proof for each of the Accused Instrumentalities:



- The '506 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '506 patent for the reasons set forth in Exhibit A.

- The '339 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '339 patent for the reasons set forth in Exhibit B.

- The '918 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '918 patent for the reasons set forth in Exhibit C.

- The '054 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '054 patent for the reasons set forth in Exhibit D.

- The '060 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '060 patent for the reasons set forth in Exhibit E.

- The '160 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '160 patent for the reasons set forth in Exhibit F.

Non-limiting examples and illustrations are used to illustrate the application of the claims to the Accused Instrumentalities. Netlist believes that for each asserted claim, the associated Accused Instrumentalities operate in the same or substantially the same manner in all material aspects. Netlist accuses products having the same or substantially the same structures and/or features identified in the representative claim charts and exhibits. Netlist



reserves the right to identify additional Accused Instrumentalities, names and model numbers, particularly in light of further discovery.

These infringement contentions provide examples of infringement that illustrate Netlist's infringement theories. However, the examples are non-limiting and are included to assist in understanding Netlist's infringement theories. For example, details regarding how the Accused Instrumentalities implement the asserted claims may vary from instrumentality to instrumentality in ways not material to the analysis of the asserted claims. The specific instrumentalities selected for the most detailed discussions in the attached claim charts are, as explained in the charts themselves and as further addressed in this document, to be understood as representative of other instrumentalities with structures, operation, or other charted characteristics that do not differ from the charted instrumentalities in ways material to Netlist's theories of infringement for the charted claims.

Moreover, Netlist's citation of portions of a document herein should not be interpreted to limit Netlist's infringement proof in expert reports or at trial. Netlist's citation of portions of a document or use of illustrations herein provide detailed notice of Netlist's theory of infringement, but Netlist intends to rely on additional evidence including, but not limited to, data sheets, design specifications, source code, testing information, reference designs, implementation and utilization information, and schematics as proof of infringement in expert reports and at trial.

Further, the attached infringement claim charts are based only on currently available information regarding Samsung's instrumentalities. Therefore, additional patents, claims, and infringement claim charts may become applicable as information regarding Samsung's instrumentalities is acquired through the discovery process and otherwise. Netlist expressly

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reserves the right to supplement and revise its infringement contentions and charted information as discovery progresses.

D. Literal Infringement and Doctrine of Equivalents

In accordance with P.R. 3-1(d), unless explicitly stated otherwise in the infringement charts, Netlist alleges that each element of each asserted claim of the Asserted Patents is literally present in the Accused Instrumentalities.

To the extent that, in the future, any differences are alleged to exist between the asserted claims and the Accused Instrumentalities, such differences are expected to be insubstantial—the Accused Instrumentalities perform exactly or substantially the same function as recited in the claims, in exactly or substantially the same way as recited in the claims, to yield exactly or substantially the same result as contemplated by the claims. Furthermore, because the structure and functionality provided by Samsung is being used to satisfy the limitations, there is no claim vitiation. Thus, should the Court find any of the claim elements not satisfied literally, the Accused Instrumentalities would still infringe under the doctrine of equivalents. For example, if a SID signal is found to not literally constitute a claimed chip select signal, infringement is still met under the doctrines of equivalent because SID encodes the chip select information to allow an HBM stack to select the corresponding array die.

Discovery in this matter is ongoing and Netlist makes these preliminary assertions based on the limited production Samsung has made to date, including Samsung's incomplete source code production, and expressly reserves the right to supplement and revise its contentions regarding infringement under the doctrine of equivalents based on additional information obtained through discovery or otherwise.



E. Statement of Earliest Priority Date

Pursuant to P.R. 3-1, the identified claims of the '506 patent claim priority to a utility application filed on July 27, 2013 (No. 13/952,599) and a provisional application filed on July 27, 2012 (No. 61/676,883). Netlist presently understands that the identified claims of the '506 patent are entitled to a priority date of at least July 27, 2012.

The identified claims of the '339 patent claim priority to U.S. Patent Application No. 12/504,131 filed on July 16, 2009, U.S. Patent Application No. 12/761,179 filed on April 15, 2010 and U.S. Application No. 13/970,606 filed on August 20, 2013. Netlist presently understands that the identified claims of the '339 patent are entitled to a priority date of at least July 16, 2009.

The identified claims of the '918 and '054 patents claim priority to U.S. Application No. 13/559,476 filed on July 26, 2012, U.S. Application No. 12/240,916 filed on September 29, 2008, and U.S. Application No. 12/131,873 filed on June 2, 2008, as well as to two provisional applications filed on June 1, 2007 (No. 60/941,586) and July 28, 2011 (No. 61/512,871). Netlist presently understands that the identified claims of the '918 and '054 patents are entitled to a priority date of at least June 1, 2007.

The identified claims of the '060 and '160 patents claim priority to U.S. provisional application No. 61/409,893 filed on November 3, 2010. Netlist presently understands that the identified claims of the '060 and '160 patents are entitled to a priority date of at least November 3, 2010.

The subject matter described by the asserted claims, however, may have been conceived and reduced to practice prior to this priority date. Netlist's investigation is ongoing and Netlist reserves the right to assert that the claims are entitled to an invention date that is earlier than the above dates. Netlist incorporates by reference its responses (and supplemental

responses) to Samsung's Interrogatory No. 1, and the deposition testimony of Scott Milton and Hyun Lee in this Action which set out dates of conception and reduction to practice.

Netlist's investigation under P. R. 3-1(e) is ongoing. Netlist incorporates by reference its responses (and supplemental responses) to Samsung's Interrogatory No. 1. Netlist further incorporates by reference the deposition testimony of Scott Milton and Hyun Lee in this Action, which set out dates of conception and reduction to practice.

F. Identification of Instrumentalities Embodying the Asserted Patents

Before the patents were issued in this case, Netlist implemented embodiments within the specification of the applications that became the patents, as disclosed in its November 2022 response to Samsung's Interrogatory No. 2, and the deposition testimony of Scott Milton, Hyun Lee, and Chuck Hong, including the notes presented by Mr. Milton and Mr. Hong at their depositions. These products were no longer being sold at the time of patent issuance. Netlist does not intend to map these products to particular claims in the patents at trial, only to discuss them as part of the conception and reduction to practice process. Netlist does not believe they come within the scope of this section. Nonetheless, in order to avoid a dispute Netlist reproduces the information from the interrogatory below:

1. 10,949,339/10,860,506:
 - HyperCloud: '506 patent embodiments
 - HybriDIMM: '339/'506 patent embodiments
2. 11,016,918/11,232,054:
 - NVDIMM, ExpressVault, NVvault, HyperVault, and HybriDIMM products listed in Netlist's responses and supplemental responses to Interrogatory No. 2.

Pending Netlist's further investigation, including expert discovery, Netlist reserves its right to supplement this identification as its investigation proceeds.

**II. P.R. 3-2 Production Number**

Netlist identifies the productions as follows:

Category	Production Range
3-2(a)	Netlist is not aware of any documents specified by paragraph 3-2(a). Netlist's investigation is ongoing and therefore Netlist reserves the right to supplement its document production as additional responsive information is located.
3-2(b)	Netlist incorporates by reference the documents cited in its response and supplemental responses to Interrogatory Nos. 1 and 2.
3-2(c)	NETLIST_SAMSUNG_EDTX0000001-2915.

Dated: December 23, 2022

Respectfully submitted,

/s/ Hong Zhong

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NETLIST, INC.

Plaintiff,

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SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG ELECTRONICS AMERICA,
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Civil Action No. 2:21-CV-00463-JRG
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JURY TRIAL DEMANDED

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**PLAINTIFF NETLIST INC.'S FIFTH SUPPLEMENTAL DISCLOSURE OF
ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

Plaintiff Netlist, Inc. (“Netlist”) submits this fifth supplemental disclosure of asserted claims and infringement contentions and accompanying document production pursuant to P.R. 3-1 and 3-2 to Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Semiconductor, Inc. (collectively, “Samsung”) with respect to U.S. Patent Nos. 10,860,506 (the “’506 patent”), 10,949,339 (the “’339 patent”), 11,016,918 (the “’918 patent”), 11,232,054 (the “’054 patent”), 8,787,060 (the “’060 patent”) and 9,318,160 (the “’160 patent”) (collectively, the “Asserted Patents”).

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I. INFRINGEMENT OF THE ASSERTED PATENTS

A. Identification of Infringed Claims

In accordance with P. R. 3-1(a), based on the public information presently available, Netlist asserts that Samsung has infringed and is infringing, directly and/or indirectly,¹ both literally and under the doctrine of equivalents, at least the following claims:

- the '506 patent: 1-3, 5, and 11-16;
- the '339 patent: 1-4, 6-23, 26-30, and 32-35;
- the '918 patent: 1-3, 5-7, 9-13, and 15-30;
- the '054 patent: 1-13, 15-17, 23-25, and 29-30;
- the '060 patent: 1-14, 16-21, and 23-28;
- the '160 patent: 1-2, 4, and 5.

Netlist makes these preliminary assertions without the benefit of complete discovery, based on Samsung's incomplete source code production, and expressly reserves the right to

¹ Netlist's infringement allegations for each of the patents addressed in this disclosure include, without limitation, infringement under 35 U.S.C. §§ 271(a)-(c), and (f).

supplement and revise its identification of asserted claims and infringing instrumentalities based on additional information obtained through discovery or otherwise to the full extent consistent with the Court's rules and orders. For example, review of pertinent physical samples, source code, HDL code, electronic schematics, circuit diagrams, data sheets and manuals may result in the addition of asserted claims.

B. Identification of Accused Instrumentalities

Pursuant to P.R. 3-1(b), Netlist presently identifies the following Samsung products, of which Netlist is aware, as "Accused Instrumentalities" under all applicable subsections of 35 U.S.C. § 271 with respect to each asserted claim as follows:

Asserted Claims	Accused Instrumentalities
<p>The '506 patent: 1-3, 5, and 11-16; The '339 patent: 1-4, 6-23, 26-30, and 32-35.</p>	<p>Samsung's DDR4 load reduced DIMMs ("LRDIMMs"), which, by way of non-limiting example, include Samsung products having the following part numbers and any products that operate in the same manner in material parts:</p> <p>M386A4K40BB0-CRC, M386A8K40BM1-CRC, M386A8K40BM2-CTD, M386A8K40BMB-CRC, M386A8K40CM2-CRC, M386A8K40CM2-CTD, M386A8K40CM2-CVF, M386A8K40DM2-CTD, M386A8K40DM2-CVF, M386A8K40DM2-CWE, M386AAG40AM3-CWE, M386AAG40MM2-CVF, M386AAG40MMB-CVF, M386AAK40B40-CUC, M386AAK40B40-CWD, M386ABG40M50-CYF, M386ABG40M51-CAE, and M386ABG40M5B-CYF.</p> <p>The Accused Instrumentalities also include any other Samsung memory products made, sold, imported and/or used by Samsung that comply with JEDEC's specifications for DDR4 LRDIMM memory modules. Examples of Samsung's DDR4 LRDIMM products can be found via Samsung's module-selector web page. <i>See Module: Memory Modules For Extensive Use</i>, Samsung, available at https://www.samsung.com/semiconductor/dram/module.</p>

<p>The '918 patent: 1-3, 5-7, 9-13, and 15-30; The '054 patent: 1-13, 15-17, 23-25, and 29-30.</p>	<p>Samsung's DDR5 LRDIMMs, registered DIMMs ("RDIMMs"), and any other Samsung memory products that operate the same way as a DDR5 LRDIMM or a DDR5 RDIMM in all material aspects.</p> <p>By way of non-limiting example, the Accused Instrumentalities include products marketed and publicized in the various Samsung materials cited in Exhibits C-D.</p>
<p>The '918 patent: 16-22; The '054 patent: 16-17, 23-25, and 29-30.</p>	<p>Samsung's DDR5 LRDIMMs, RDIMMs, small-outline DIMMs ("SODIMMs"), unbuffered DIMMs ("UDIMMs"), and any other Samsung memory products with an onboard power conversion and control module that operate the same way in all material aspects.</p> <p>By way of non-limiting example, the Accused Instrumentalities include products marketed and publicized in the various Samsung materials cited in Exhibits C-D.</p>
<p>The '060 patent: 1-14, 16-21, and 23-28; The '160 patent: 1, 2, 4 and 5.</p>	<p>Samsung's HBM2, HBM2E, HBM3 and newer products with 4 or more stacked DRAM dies products, and any other Samsung memory products that operate the same way in all material aspects. A non-exhaustive list of the model numbers includes:</p> <p>KHA883901B-MC12, KHA884901X-MC12, KHA884901X-MC13, KHA884901X-MN12, KHA884901X-MN13; KHAA44801B-MC17, KHAA84901B-MC17, KHAA44801B-MC16, KHAA84901B-JC16, KHAA84901B-JC17, KHAA84901B-MC16, KHBA84A03C-MC1HT, and KHBAC4A03C-MC1HT, and those products materials cited in Exhibits E-F.</p>

As to the other claims in each of the asserted patents, Netlist requires source code in order to determine whether they are infringed. These are claims 4, 6-10, and 17-20 of the '506 patent; claims 5, 24-25, and 31 of the '339 patent; claims 4, 8, and 14 of the '918 patent; claims 14, 18-22, and 26-28 of the '054 patent; claims 15 and 22 of the '060 patent; and claims 3 and 6-20 of the '160 patent. Samsung should treat these claims as asserted claims.



Additionally, use of the above accused products by Samsung, its agents (such as retailers, distributors, and repair services), and/or its customers infringes the asserted method-of-use claims. Samsung induces such direct infringement because it has knowledge of the patents, knows that the design of the accused products will cause them to be used in a manner that practices the steps of the asserted method-of-use claims, but nevertheless encourages such infringing use through its sales, promotion, and marketing activities with an intent of inducing infringement. In addition, Samsung is willfully blind to the risk of infringement. Samsung also contributes to direct infringement because it has knowledge of the patents, knows that the products have no substantially non-infringing use, and constitute a material part of the patented invention.

Further details can be found in the attached Exhibits A-F.

Netlist believes that its damages for Samsung's infringement may accrue on a worldwide basis, including worldwide manufacturing, uses, sales, offers to sell, and imports, to the extent permitted by applicable law or any stipulation the parties are able to reach regarding United States nexus. *See, e.g., Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, 807 F.3d 1283, 1306-11 (Fed. Cir. 2015).

Discovery in this matter is ongoing and Netlist makes these preliminary assertions without discovery yet occurring in this action, and expressly reserves the right to supplement and revise its identification of asserted claims and infringing instrumentalities based on additional information obtained through discovery or otherwise.

C. Preliminary Infringement Claim Charts

Pursuant to P.R. 3-1(c), Netlist provides the attached charts that identify where each limitation of each asserted claim is found in representative proof for each of the Accused Instrumentalities:



- The '506 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '506 patent for the reasons set forth in Exhibit A.
- The '339 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '339 patent for the reasons set forth in Exhibit B.
- The '918 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '918 patent for the reasons set forth in Exhibit C.
- The '054 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '054 patent for the reasons set forth in Exhibit D.
- The '060 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '060 patent for the reasons set forth in Exhibit E.
- The '160 patent: Netlist contends that the Accused Instrumentalities and any of Samsung's other products incorporating a design substantially similar to that of the Accused Instrumentalities, infringe the '160 patent for the reasons set forth in Exhibit F.

Non-limiting examples and illustrations are used to illustrate the application of the claims to the Accused Instrumentalities. Netlist believes that for each asserted claim, the associated Accused Instrumentalities operate in the same or substantially the same manner in all material aspects. Netlist accuses products having the same or substantially the same structures and/or features identified in the representative claim charts and exhibits. Netlist



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Moreover, Netlist's citation of portions of a document herein should not be interpreted to limit Netlist's infringement proof in expert reports or at trial. Netlist's citation of portions of a document or use of illustrations herein provide detailed notice of Netlist's theory of infringement, but Netlist intends to rely on additional evidence including, but not limited to, data sheets, design specifications, source code, testing information, reference designs, implementation and utilization information, and schematics as proof of infringement in expert reports and at trial.

Further, the attached infringement claim charts are based only on currently available information regarding Samsung's instrumentalities. Therefore, additional patents, claims, and infringement claim charts may become applicable as information regarding Samsung's instrumentalities is acquired through the discovery process and otherwise. Netlist expressly

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reserves the right to supplement and revise its infringement contentions and charted information as discovery progresses.

D. Literal Infringement and Doctrine of Equivalents

In accordance with P.R. 3-1(d), unless explicitly stated otherwise in the infringement charts, Netlist alleges that each element of each asserted claim of the Asserted Patents is literally present in the Accused Instrumentalities.

To the extent that, in the future, any differences are alleged to exist between the asserted claims and the Accused Instrumentalities, such differences are expected to be insubstantial—the Accused Instrumentalities perform exactly or substantially the same function as recited in the claims, in exactly or substantially the same way as recited in the claims, to yield exactly or substantially the same result as contemplated by the claims. Furthermore, because the structure and functionality provided by Samsung is being used to satisfy the limitations, there is no claim vitiation. Thus, should the Court find any of the claim elements not satisfied literally, the Accused Instrumentalities would still infringe under the doctrine of equivalents. For example, if a SID signal is found to not literally constitute a claimed chip select signal, infringement is still met under the doctrines of equivalent because SID encodes the chip select information to allow an HBM stack to select the corresponding array die.

Discovery in this matter is ongoing and Netlist makes these preliminary assertions based on the limited production Samsung has made to date, including Samsung's incomplete source code production, and expressly reserves the right to supplement and revise its contentions regarding infringement under the doctrine of equivalents based on additional information obtained through discovery or otherwise.

E. Statement of Earliest Priority Date

Pursuant to P.R. 3-1, the identified claims of the '506 patent claim priority to a utility application filed on July 27, 2013 (No. 13/952,599) and a provisional application filed on July 27, 2012 (No. 61/676,883). Netlist presently understands that the identified claims of the '506 patent are entitled to a priority date of at least July 27, 2012.

The identified claims of the '339 patent claim priority to U.S. Patent Application No. 12/504,131 filed on July 16, 2009, U.S. Patent Application No. 12/761,179 filed on April 15, 2010 and U.S. Application No. 13/970,606 filed on August 20, 2013. Netlist presently understands that the identified claims of the '339 patent are entitled to a priority date of at least July 16, 2009.

The identified claims of the '918 and '054 patents claim priority to U.S. Application No. 13/559,476 filed on July 26, 2012, U.S. Application No. 12/240,916 filed on September 29, 2008, and U.S. Application No. 12/131,873 filed on June 2, 2008, as well as to two provisional applications filed on June 1, 2007 (No. 60/941,586) and July 28, 2011 (No. 61/512,871). Netlist presently understands that the identified claims of the '918 and '054 patents are entitled to a priority date of at least June 1, 2007.

The identified claims of the '060 and '160 patents claim priority to U.S. provisional application No. 61/409,893 filed on November 3, 2010. Netlist presently understands that the identified claims of the '060 and '160 patents are entitled to a priority date of at least November 3, 2010.

The subject matter described by the asserted claims, however, may have been conceived and reduced to practice prior to this priority date. Netlist's investigation is ongoing and Netlist reserves the right to assert that the claims are entitled to an invention date that is earlier than the above dates. Netlist incorporates by reference its responses (and supplemental

responses) to Samsung's Interrogatory No. 1, and the deposition testimony of Scott Milton and Hyun Lee in this Action which set out dates of conception and reduction to practice.

Netlist's investigation under P. R. 3-1(e) is ongoing. Netlist incorporates by reference its responses (and supplemental responses) to Samsung's Interrogatory No. 1. Netlist further incorporates by reference the deposition testimony of Scott Milton and Hyun Lee in this Action, which set out dates of conception and reduction to practice.

F. Identification of Instrumentalities Embodying the Asserted Patents

Before the patents were issued in this case, Netlist implemented embodiments within the specification of the applications that became the patents, as disclosed in its November 2022 response to Samsung's Interrogatory No. 2, and the deposition testimony of Scott Milton, Hyun Lee, and Chuck Hong, including the notes presented by Mr. Milton and Mr. Hong at their depositions. These products were no longer being sold at the time of patent issuance. Netlist does not intend to map these products to particular claims in the patents at trial, only to discuss them as part of the conception and reduction to practice process. Netlist does not believe they come within the scope of this section. Nonetheless, in order to avoid a dispute Netlist reproduces the information from the interrogatory below:

1. 10,949,339/10,860,506:

- HyperCloud: '506 patent embodiments
- HybriDIMM: '339/'506 patent embodiments

2. 11,016,918/11,232,054:

- NVDIMM, ExpressVault, NVvault, HyperVault, and HybriDIMM products listed in Netlist's responses and supplemental responses to Interrogatory No. 2.

Pending Netlist's further investigation, including expert discovery, Netlist reserves its right to supplement this identification as its investigation proceeds.

**II. P.R. 3-2 Production Number**

Netlist identifies the productions as follows:

Category	Production Range
3-2(a)	Netlist is not aware of any documents specified by paragraph 3-2(a). Netlist's investigation is ongoing and therefore Netlist reserves the right to supplement its document production as additional responsive information is located.
3-2(b)	<u>Netlist incorporates by reference the documents cited in its response and supplemental responses to Interrogatory Nos. 1 and 2.</u>
3-2(c)	NETLIST_SAMSUNG_EDTX0000001-2915.

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Respectfully submitted,

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